

Workhouse Jail Inspection Report

Medium Security Institution

St. Louis, Missouri

Re: Cody et. al. v. City of St. Louis

Case no. 4:17-cv 2707-AGF

Submitted to:

Attorneys Jacqueline Kutnik-Bauder & Samuel Henderson

Arch City Defenders

440 N. 4<sup>th</sup> Street, Suite 390

St. Louis, MO 63102

By

James J. Balsamo, Jr. VP R.W. Powitz and Associates

4217 David Drive

Metairie, LA 70003

Tel # 504-234-6968

Email: yogi\_8@email.com

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James J. Balsamo, Jr., MS, MPH, MHA, RS, CSP, DLAAS

# TABLE OF CONTENTS

Section	<b>1. Introduction .....</b>	<b>P. 1/A</b>
	A. HVAC Systems for Dormitories.....	P. 1/A
	B. POD Housing Units-HVAC Systems.....	P. 3/A
Section	<b>2. Fire Smoke Detection, Alarms, Suppression Systems...</b>	<b>P. 5/A</b>
Section	<b>3. The Emergency Generator Information.....</b>	<b>P. 8/A</b>
Section	<b>4. Inspection of the Emergency Generator.....</b>	<b>P. 8/A</b>
Section	<b>5. Summary.....</b>	<b>P. 10/A</b>
Section	<b>6. Conclusion.....</b>	<b>P. 12/A</b>
Section	<b>7. Appendix.....</b>	<b>P. 1A</b>
	Appendix .....	P. 2A
Section	<b>8. Equipment List of Tools used for 1/16/2020 Inspection</b>	
Section	<b>9. Photos and Photo log</b>	

As part of the renovation, some of the previously noted damaged and missing exhaust vents in the ventilation system in some of the dormitory shower areas were also being repaired and replaced. (Photos # 17A and 18A).

The ventilation vents in the toilet areas were also being repaired and replaced. (Photos # 19A, 20A, 21A, 22A)

B. POD Housing Units (newer housing area) HVAC Systems

1. In the POD housing area, there are 2 air conditioning units and 2 air handling units to meet the HVAC needs in the POD areas. This is done, as best as I could determine from Mr. Justus' deposition and my discussions with facility personnel during my 1/16/2020 inspection, by using packaged air treatment units located on the roof of the POD housing areas to provide cool air to the POD housing areas. Air handlers (Photos # 23A and 24A) move heated air to these housing units, after the air is heated as it passes over the coils containing hot water provided by boilers. (Photo # 25A). I was told that the package treatment units were installed in the 1990s. From what was explained to me smoke detectors located in the air handlers on the roof shut down the air handlers, so they do not transmit smoke throughout the building areas covered by those air handlers. Fire doors and smoke doors are said to close when the smoke alarms sound.
2. There are supply air and exhaust air vents in individual cells in the POD housing units. Supply air temperatures, relative humidity and Carbon Dioxide levels as well as the air velocity readings were taken in randomly selected cells in randomly selected housing units. The housing units selected were HU-1 and HU-4 in the POD housing areas. The specific cells were selected by using birth dates from several facility staff accompanying me on my inspection. These readings are noted in a tabular format as seen below. There are 57 cells in each of these housing units and I selected 3 cells from each of the two housing units selected.

<b>Housing Unit</b>	<b>Cell #</b>	<b>Cell air temp. F.</b>	<b>%RH</b>	<b>PPM CO2</b>	<b>Air Velocity CFM</b>
HU-1	6	72.0 degrees	16.9 %	768PPM	57.5 FPM
	17	71.2 degrees	15.8%	640 PPM	112.5 CFM
	29	72.2 degrees	13.8	836 PPM	237 CFM
HU-4 Females	5	73.4 degrees	13.5 %	640 PPM	250 CFM
	16	71.7 degrees	16.6 %	864 PPM	10.4 CFM
	30	73.1 degrees	14.8 %	723 PPM	28.25 CFM
HU-4 Shower Exhaust #2.....					27.5 CFM
HU-1 Dayroom		70.4 degrees	18.9%	692 PPM	.....

\*\*\* All measurements were within acceptable APHA/ACA limits except HU-4, Cell # 16 which was half of the APHA/ASHRAE Standards of 20 CFM per person of outside air, or recirculated filtered air to any housing unit. While this limited sampling appears to be good, it also indicates that a more extensive survey of these parameters should be undertaken by trained, competent mechanical facility personnel or a qualified third party.

3. Overpainting (indiscriminate painting over ventilation grills and sprinkler heads) in POD Cells and Showers was very evident in areas. There was evidence of a recent coat of heavy white paint, which restricts air flow and interferes with the fire sprinkler systems.

- a. Cells in PODs:

In cells in some areas of the PODs chipped and peeled undercoats of paint could be seen on and around the vents including in cell # 17 of HU-1 (Photo # 26A). In some cases, the new paint was just painted over other extraneous materials on the walls and vents. This attempt to cover over years of neglect as was seen in my initial inspection photographs of 10/30/2018 was obvious in the noted photographs taken during the 1/16/2020 inspection. (Photos # 27A, 28A, 29A, 30A).

In cells in the POD units, there was evidence of overpainting of vents thereby obstructing the flow of air through the vent openings in the cells. (Photos # 31A and 32A). This type of cover up renovation will not hold up to the daily cleaning and abuse of these surfaces over time and the outer coat of paint will soon begin to peel and chip. Overpainting and obstructing cell vent openings as shown in (Photos 33A and 34A) must be corrected as this affects the ventilation system function in these cells.

Painting over fire sprinkler heads in cells in the POD areas was noted such as that which can be seen in cell HU-4, cell #30 and in HU-1, cell 17. This type of overpainting can interfere with the proper operation of the fire suppression system in these areas thereby jeopardizing the life and safety of inmates in these cells. (Photos # 34A and 35A).

Renovating POD cells is good, but inspections of the cells in HU-4, cell 16 and HU-4, cell 30 revealed toilet bowl stains in one toilet and some extraneous materials on the seat of another of those toilets. (Photos #36A and 37A). Ongoing sanitation in these sampled cells of this HU-4 unit must be improved overall. Findings of sanitation issues in 2 of 3 units sampled indicates that correctional staff in these areas must be more attentive in making sure inmates maintain their cells in an orderly and sanitary manner.

- b. Showers in PODS:

In the showers in the POD areas, rust was painted over on some of the vent grills and some of the vent grills were bent and not seated properly, thereby possibly interfering with proper air flow. (Photos # 38A, 39A, 40A, 41A, 42A, and 43A.).

These issues need to be properly repaired or the vents and grills replaced. The light